LIQUIDITY MANAGEMENT AND CORPORATE SURVIVAL OF MANUFACTURING FIRMS IN NIGERIA

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Abstract: *This study empirically examined the effects of liquidity management on the survival of listed manufacturing firms in Nigeria. Specifically, the study examined the effect of the current ratio, quick ratio, solvency ratio and cash coverage ratios on the survival of listed manufacturing firms in Nigeria. The study used Ex-post facto research design while secondary data was gathered from audited financial statements of the 12 selected manufacturing firms over 2012 – 2017. The data was analyzed using Auto-Regressive Moving Average Generalized Least Square Regression with the aid of the E-views 9.5 statistical package. The study found that quick ratio, solvency ratio and cash coverage ratios, have significant positive effect on the corporate survival of manufacturing firms in Nigeria. The study equally found that the current ratio has a positive and non-significant effect on the corporate survival of manufacturing firms in Nigeria. It was concluded that liquidity management is a prerequisite for corporate survival in the manufacturing sector in Nigeria. Based on the findings, it was recommended that manufacturing firms should put in place accurate liquidity management procedures to avoid facing bankruptcy.*

1.0   INTRODUCTION

The existence, survival, growth and stability of any corporate body is highly dependent on the efficiency and effectiveness of its liquidity management. This is measured by the ability of the organization's management to combine all the necessary materials for optimal and efficient actualization of their set objectives within the stipulated time. In this task, cash forms the life wire as it determines to a large-extent, the level of growth, existence and survival of the organization among other competing organizations (Waswa *et al*., 2018). However, it becomes imperative for the management of any organization to give a close attention to the management of liquidity if they want to stand the test of time. This is because, insufficient liquidity or poor liquidity management will result in liquidity crisis and financial constraints which can potentially threaten the continued existence of the company and can force the company into bankruptcy. On the contrary, efficient liquidity management would aid the management in channelling the best proportion of its investment on both fixed and current assets and finally her liability level to enable improvement and correction of imbalances in the liquidity position of the firm (Nwankwo & Osho, 2010). Hence, firms have to focus on the management of its cash (cash coverage ratio), working capital (ratios and quick ratios), as well as long term stability (solvency ratio) so as to secure gradual and systematic growth.

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Consequently, survival of corporate organization entails the ability of the organization to be successful, thrive into the foreseeable future, without becoming bankrupt; Or, the ability of the organizations to continue in operations and grow over time (Yusuf, Nwufo & Oima, 2019). However, no manufacturing firm can survive without efficient and effective liquidity management (Li *et al*., 2020); hence, the concept of working capital management has been a source of worry to firm Managers, operators and investors. The issue has remained how to devise a better strategy of managing operations of corporate organization to meet their financial obligations as they fall due in the face of unexpected market shocks in the financial market (Yameen *et al*., 2019). Thus, this study was focused on assessing liquidity management as a prerequisite to corporate survival among manufacturing firms in Nigeria.

1.1 Statement of the Problem

Liquidity management is a concept that is receiving serious attention all over the world especially with the current financial situation and the state of the world economy. The concern of business owners and managers all over the world is to devise a strategy of managing their day-to-day operations to meet their obligations as they fall due and increase profitability and shareholder's wealth. However, there seem to be scanty empirical works linking liquidity with corporate survival in the Nigerian manufacturing space.

Again, despite the value placed on the importance of liquidity management among firms, there has been the problem of liquidity mismatch, as managers have not been able to effectively manage their liquidity components. This inability has resulted in firms being unable to meet their financial obligations as they fall due, thereby, exposing them to financial shocks and cash traps, which have consolidated their inability to succeed. Thus, an investigation of the impact of liquidity management on corporate survival is of necessity, in order to show the underlying components of liquidity that can exert influence on the success of firms in the manufacturing sector in Nigeria.

1.2 Objectives of the Study

The broad objective of the study is to examine the effect of liquidity management on the corporate survival of listed manufacturing firms in Nigeria. The specific objectives are as follows:

i. To ascertain the effect of the current ratio management on corporate survival of listed manufacturing firms in Nigeria.

ii. To determine the effect of quick ratio management on corporate survival of listed manufacturing firms in Nigeria

iii. To investigate the effect of the solvency ratio management on corporate survival of listed manufacturing firms in Nigeria.

iv. To investigate the effect of the cash coverage ratio management on corporate survival of listed manufacturing firms in Nigeria.

1.3 Research Questions

To achieve the broad objective of this study, the following questions guided the study in line with the specific objective variables:

i. What effects does the current ratio management have on corporate survival of listed manufacturing firms in Nigeria?

ii. What effects does the quick ratio management have on corporate survival of listed manufacturing firms in Nigeria?

iii. Does the solvency ratio management have any effect on corporate survival of listed manufacturing firms in Nigeria?

iv. Does the cash coverage ratio management have any effect on corporate survival of listed manufacturing firms in Nigeria?

1.4 Research Hypotheses

The research hypotheses were stated in null forms only as follows:

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HO₁: Current ratio management has no significant effect on corporate survival of listed manufacturing firms in Nigeria.

HO₂: Quick ratio management has no significant effect on corporate survival of listed manufacturing firms in Nigeria.

HO₃: Solvency ratio management has no significant effect on corporate survival of listed manufacturing firms in Nigeria.

HO₄: Cash Coverage ratio management has no significant effect on corporate survival of listed manufacturing firms in Nigeria.

1.5   Implications of the Study

Crucially, corporate liquidity management may have implications for firms' real activities such as investment, employment, research and development (R&D), and ultimately, its survival. Understanding how liquidity management can alleviate the impact of financing frictions on real activity is of interest not only for researchers but also for policymakers. This study will thus be useful for regulators, finance managers and other people concerned about corporate liquidity to understand its empirical linkage with corporate survival.

1.7   Scope of the study

To the best of the researchers' knowledge, most corporate finance studies relating to liquidity and financial performance in Nigeria and globally are more aligned to a firm's profitability. This study contributively fills that gap by concentrating on corporate survival, which is the result of effective liquidity management. This study is considered one of the pioneering studies that examine the impact of liquidity on the survival of Nigerian quoted manufacturing companies. It is thus considered a battery for further research in this area.

The study covers all the manufacturing companies quoted in Nigerian Stock Exchange (NSE) from 2012 - 2017. Manufacturing companies were chosen based on the fact that they are very crucial to the development of adequate and proper healthy conditions for the nation and need to be viable in their operations to satisfy the public expectations from them. The time scope between 2012-2017 was chosen because it was the period when regulators called for more reporting regarding the liquidity and financial health of companies.

2.0   REVIEW OF RELATED LITERATURE

2.1   Conceptual Issues

2.1.1   Liquidity Management

Corporate liquidity has been defined as the ability for firms to meet their short-term obligations using their most liquid assets. It is also the ease with which a company can pay its bills and liabilities over the next year, especially if it must convert its assets into cash in order to do so. The factors affecting the liquidity requirements of a firm are nature and size of the business, growth and expansion activities manufacturing cycle, production policy, turnover of circulating capital, credit terms, operating efficiency and price level changes.

Although liquidity is a popular theme in the accounting and finance literature, its impacts on performance may be a little complex. Based on previous literature, Serrasqueiro and Nunes (2018) on the one hand summarize some reasons for positive effects of liquidity on performance, like advancing the capacity to deal with changes of competitive markets and the importance for meeting short-term commitment; on the other hand, they point out the theoretical possibility for a negative relationship between liquidity and performance, which may come from the conflicts between owners and managers. The predictability of asset rotation on failure is also challenged by Charitou, Neophytou and Charalambous (2014) due to their findings of statistical insignificance.

Liquidity management has been vastly described by experts. Their opinions fortunately are convergent. According to the Chartered Institute of Bankers of Nigeria (CIBN, 2010), liquidity management is employed in planning, monitoring and controlling

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cash inflows, cash outflows and the firm's cash position aimed at optimizing its liquidity. Uwuigbe, Uwalomwa and Egbide (2012) described cash management, otherwise liquidity management, as a tool for discerning the firm's expected cash receipts and disbursements, choosing an optimal source of alternative financing and maximizing expected returns from investing idle cash. Larsson and Hammarlund (2015) opined that such items as receivables system, payables system, currency management and risks, liquid funds management, trade and other debtors, trade and other creditors and short-term financing should form part of the cash management.

Effective liquidity management practices are imperative if firms in the manufacturing sector desire to satisfy the diverse interests of stakeholders. Firms that manage their cash and cash equivalents effectively optimize the use of current assets and current liabilities during each financial / accounting year, speed up collections, delay disbursements/payments reasonably, manage risks of keeping idle and or little cash and make appropriate use of feedback (Allman-Ward and Saguer, 2013). Regrettably, the practice is quite distinct in Nigeria. This work decomposes liquidity into both short-term liquidity and long-term liquidity and consequently emphasizes both short-term liquidity and long-term liquidity management. Short-term liquidity describes the firm's ability to meet its financial obligations falling due within one year. Its management is associated with working capital variables or current assets and current liabilities variables such as receivables, inventor and payables). Long-term liquidity on the other hand refers to the firm's ability to meet financial obligations falling due after one year. Its management is associated with solvency and cash flow variables such as income, liabilities, cash flows, and interest (Preve, 2011).

A. Short Term Liquidity Management

Many companies underestimate the importance of short-term liquidity management, which is essential for companies to determine their short-term financial positions to meet operational needs. A significant change in working capital provides important information to the company's various stakeholders, and this is especially true for the current ratios and quick ratios. Eljelly (2014) states that the management of working capital becomes even more important during crises periods as well as in good times. He further opined that the efficient management of the liquidity levels of a company is of extreme relevance for the firm's well-being, and that improved working capital has a potential impact on risk reduction and fulfilment of payment obligations in the short-run.

The current ratio indicates the capacity of the firm to offset maturing short-term obligations. It is essential to sustain the current ratio on the level which ensures timely fulfilment of debt obligations. Therefore, the firm should maintain a higher current assets level than current liabilities. A decrease in the current ratio is a signal of a reduction in liquidity and might be an indication of declining profitability. Despite this notion, a very significant current ratio could signify over liquidity implying that investable funds are tied in liquidity with zero returns leading to a cash trap and eventual close down of business (Batten & Vo, 2017).

The quick ratio (also known as the acid test ratio) is considered a more conservative measure than the current ratio, which includes all current assets as coverage for current liabilities. The higher the ratio result, the better a company's liquidity and financial health; the lower the ratio, the more likely the company will struggle with paying debts. Lenders look to the quick ratio because it shows the percentage of a firm's debts that could be paid off by quickly converting assets into cash (Li, Musah and Kong, 2020). Lenders often look at this ratio because

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the more liquid a firm's assets, the better equipped it is to adapt to changing conditions in the business environment. It, therefore, measures how quickly a company can pay off its short-term debts and obligations through its near-cash (current) assets. A decrease in quick ratio shows that near-cash assets are not able to cover current financial obligations. This could spell "financing doom" on the company as lenders would not be willing to provide additional funds to meet their obligations. This implies the continuity of the firm (Yusuf, Nwofu & Chima, 2019).

B. Long Term Liquidity Management

Business managers tend to prioritize profit maximization, and consequently use some particularly short-term-minded means, such as using large amounts of debt to grow faster. However, this vague priority could lead to major long-term problems as the business erodes its ability to stay solvent in the face of depleted cash to pay interest and lump sum borrowed. This is why solvency and cash coverage (which are long-term liquidity positions) should be the mantra of discussions in every corporate boardroom that wants to stay viable and financially healthy (Yameen Farhan & Tabash, 2019).

Solvency refers to a company's ability to meet its long-term financial obligations. It's a company's financial staying power. In general, a solvency ratio measures the size of a company's profitability and compares it to its obligations. By interpreting a solvency ratio, an analyst or investor can gain insight into how likely a company will be to continue meeting its debt obligations. A stronger or higher ratio indicates financial strength. In stark contrast, a lower ratio, or one on the weak side, could indicate financial struggles in the future. A primary solvency ratio is usually calculated as a firm's cash-based profitability as a percentage of its total long-term obligations. Thus, once solvency is lost that company is said to be insolvent, which leaves it with no other choice but to enter bankruptcy to liquidate (Waswa, Mukras & Oima, 2018).

Cash flow analysis use ratios that focus on cash flow and how solvent, liquid and viable the company is in the long term. Financial ratios are commonly used as an indicator of the liquidity position of a firm. The traditional ratios using figures from the balance sheet and income statement have long been familiar with financial analysts and users of financial statements. Recently, the use of cash-flow-based ratios has emerged and brought a new perspective to liquidity measurement. As prepared on a cash basis, the cash flow statement is more likely to reveal the true picture of a company's health (Ofoegbu, Duru, & Onodugo, 2016). The cash coverage ratio measures the company's ability to meet interest payments on its entire debt load. It is an accounting ratio that is used to measure the ability of a company to cover its interest expense and whether there are sufficient funds available to pay interest and turn a profit. Any company with a cash interest coverage that is less than 1has a high default and bankruptcy risk (Tin, Nga & lahn, 2017).

2.1.2 Corporate Survival

Firm survival has many interpretations, which are both subjective and objective. The most objective way to measure survival in organizations is to observe their continuing existence. An organization survives as long as it "acquires inputs from suppliers and provides outputs to a given public (customers, clients, patients, etc.)." The organization fails when coalitions of resource providers cannot be induced to supply resources and the firm cannot repay resource providers for past support.

The neoclassical theory of the firm provides early insights into the analysis of the survival of firms. According to neoclassical theory, in a perfectly competitive market, firms that are not able to compete finds it difficult to stay in the market and are driven out of the market. In this kind of environment,

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the market is dominated by productive and competitive firms (Lopes-Garcia and Puente, 2006). Firm survival is considered the ultimate criterion of organizational effectiveness. Suarez and Utterback (1995) define survival as the probability that a firm will continue operations rather than exit an industry. Firm survival has been studied by researchers in various fields, with numerous determinants postulated (Manjòn-Antolín & Arauzo-Carod, 2008). Researchers have examined the firm-specific factors that contribute to firm survival. Among them, firm size and age are found significant, as newer or smaller firms generally have a higher likelihood of failure due to the superior resources and expertise of their larger or more mature competitors.

Economists have also studied the relationship between firm growth and survival. They find that, while mature firms can grow "proportionately" according to "Gibrat's Law", young firms must grow more quickly (disproportionately) to reach a minimum scale level to survive (Lotti, *et al*., 2003). The ability to grow quickly and effectively may therefore be a key factor for survival, given the rapid pace of technological change and the subsequent emergence of new markets.

The resource-based theory of the firm has also suggested other determinants of firm survival. The theory states that the ability of the firm to develop distinct capabilities is critical for its survival (Perez & Castillejo, 2008). They argue that a firm's capabilities depend on research and development and advertising. These characteristics are not likely to be imitated by other firms and tend to continuously improve the efficiency of the firm. Related to research and development is an innovation that provides firms with the ability to cope with the changing technological environment. Highly innovative firms increase their survival changes (Coad, 2009). In addition, the literature also suggests other factors such as foreign ownership, geographic location, the legal status of the firm and

macroeconomic variables such as economic growth. So, the simple definition of survival for this study is non-failure or non-bankruptcy of an existing organization.

In the work of Antil (2021), firm's survival is associated with bankruptcy probability of firms. It is usually measured using the Altman Z-score. The Altman's Z-Score model is a numerical measurement that is used to predict the chances of a business going bankrupt. Altman's Z-score model is considered an effective method of predicting the state of financial distress of any organization by using multiple balance sheet values and corporate income ratios, such as working capital to total assets, earnings before interest and taxes to total assets, retained earnings to total assets, sales to total assets, and market capitalization over total liabilities (Dikov, 2019). A high Altman ratio means high probability of bankruptcy, which shows low chances of survival, while a low Altman ratio indicates a low probability of bankruptcy, which implies high survival rate. Corporate survival in this study was estimated using Altman Z-score.

2.1.3 Liquidity Management and Firm Corporate Survival

The theories on liquidity constraints link firm survival to firm financial position. It is argued that firms with weaker financial positions are likely to exit the markets (Clementi & Hopenhayn, 2006). Financial constraints influence firm behaviour in several ways, such as investment in fixed capital, inventories and research and development (Bridges and Guariglia, 2008).

The financial health of the firm is reflected by the strength of its balance sheet. It is expected that firms with stronger balance sheets will be better placed to navigate the negative shocks in the market. In addition, financially constrained firms are likely to find it difficult to survive compared to unconstrained firms. These constraints may hinder the growth of the firm from reaching the minimum efficient size. This

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increases the probability of failure. On the other hand, corporate finance theories, such as the agency theory argue that firms with higher solvency ratios have higher chances of survival. Liquidity indicators usually appear in the research of predicting bankruptcy, business failure and corporate survival, emphasizing the need for optimal liquidity positions for firms to thrive well in today's business environment (Waswa *et al*., 2018).

In addition to the level of cash holdings, theory predicts that the sensitivity of cash holdings to cash flows should depend on whether the firm is financially constrained. We explain in detail why corporate savings in response to incremental cash flows are likely to be related to the financial frictions firms face. Overall, the evidence suggests that consistent with theory, a firm's cash flow sensitivity of cash tends to be positive for financially constrained firms and close to zero for unconstrained firms (Yusuf *et al*., 2019).

The cash flow sensitivity of cash is likely to be a useful measure of financial constraints, because of its theoretical and empirical relations with the existence of financial constraints. It reflects the management's view on the likelihood of facing financial constraints in the future, which is useful in many applications. Several papers have used this approach to answer various questions, and it appears to be useful at identifying constrained and unconstrained firms (Li *et al*., 2020).

Although there are theoretical reasons to focus on cash when studying liquidity management, this focus is not always appropriate. The literature's focus on cash has been partially driven by the lack of data on substitute mechanisms such as credit lines and derivative-based hedging. However, it is increasingly feasible to incorporate these alternative mechanisms into empirical studies. For example, recent studies have documented that the existence of undrawn credit lines can add substantially to a firm's liquidity. Firms that hold undrawn credit lines also

hold some cash, but firms without access to credit lines hold significantly more cash than the average firm (Yameen *et al*., 2019).

2.2   Theoretical Back-up

The financial hierarchy theory established by Donaldson (1961) was rationalized by Myers and Majluf (1984) in respect of the financial approach to theory. Regarding this theory, scholars are interested in the relationship between liquid assets and the value of the firm (explained by the ability of these firms to survive). Also, how these liquid assets optimize the capital structure of the firm in the long run (Kytonen, 2002). Financial theory reflects the liquidity management problem based on optimizing the capital structure of a firm. Kytonen suggested that liquidity management can be linked to financial theory by considering its relevance in an imperfect/underdeveloped market. In other words, adding cash balances to such financial theoretic models as the capital asset pricing model (CAPM) or Modigliani-Miller (M&M) model links liquidity management to the financial theory. The effects of the inclusion of cash balances in these theoretical models show the significance of liquid assets for the value or otherwise, survival of the firm.

The financial hierarchy theory is also called the Pecking Order Theory of Liquidity. According to the theory, to achieve manufacturing firms' profit optimization objective, optimal/adequate cash and cash equivalents (financial slack) must be maintained to prevent transaction and other costs inherent in sourcing financing from outside. The theory insinuates the non-existence of an optimal level of cash holdings given that an optimal level of debt does not exist.

Further, Brealey and Myers (1996) in their findings of the theory postulated that (i) firms would firstly prefer an internal source of financing preferably profits and reserves. These reserves in reality are represented/embedded in cash and cash equivalents, otherwise known as liquidity. The theory applies to

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our study as the theory depicts that corporate liquidity and solvency relate to corporate continuity. These channels increase the value of the firm and ensure regular payment of financial obligations, which reduces the risk of bankruptcy and/or eventual takeover.

2.3 Empirical Review

Li *et al*. (2020) investigated liquidity and firm performance nexus: a piece of panel evidence from non-financial firms listed in the Ghana Stock Exchange. This research aimed to establish the nexus between liquidity and the viability of quoted non-financial establishments in Ghana. Panel data deduced from the published annual reports of 15 entities for the period 2008 to 2017 was employed for the study. Preliminarily, cross-sectional reliance, unit root, serial correlation, heteroscedasticity, co-integration, and causality tests were respectively performed. Our findings established that there exists no cross-sectional reliance, and input variables are stationary and co-integrated with no presence of heteroscedasticity and serial correlation. Estimates from the random effects generalized least squares (GLS) regression showed that liquidity has a significant adverse effect on the firms' Return on Equity (ROE) but had an insignificantly positive effect on ROE when surrogated by the cash flow ratio. Finally, a test based on causalities uncovered that, except forthe Current Ratio and ROE that are flanked by the bidirectional liaison, no other causal affiliation was evidenced amid other variables. Policy recommendations are further discussed. Based on the findings, they recommended that to ensure continued survival and success, the firms should not play with the issue of liquidity management. The entities are required to keep an optimal liquidity level that will be capable of performing the "twin" role of meeting their financial obligations and at the same time maximizing their shareholders' wealth. This optimal liquidity level could be obtained if the establishments are to meet the standards set by the GSE. Adhering to these standards will aid the firms to bring down the cases of financial drought. In other words, the firms should keep an adequate level of liquidity that will not portend their going concern status, and yet allow them to make ample returns on their investments. Thus, the firms should strike a balance (trade-off) between their liquidity and profitability.

Yusuf *et al*. (2019) explored the optimum synergy between liquidity and performance management of quoted banks in Nigeria. They investigated the optimal interaction between liquidity and profitability management of quoted banks in Nigeria. Secondary data was collected from financial statements of Deposit Money Banks in Nigeria as of 31st December 2013. However, the sample size was determined using purposive sampling techniques. Profitability and liquidity variables were used and a multiple regression model, correlation analysis and F-tests were employed in testing the hypothesis at a 5% level of significance. The result showed that there is significant optimum synergy between liquidity and profitability management of banks in Nigeria. Also, optimum liquidity and profitability management is achieved when a balance is struck between the two performance indicators in such a way that the pursuit of one of them does not lead to a detrimental effect on the other. They concluded that banking companies must try to optimize their liquidity without hindrance to their profit maximization goal. The study recommends that banks should maintain optimum liquidity and profitability equilibrium. Moreover, appropriate and stiff sanctions should be taken against banks that mismanage their working capital.

Yameen *et al*. (2019) investigated the impact of liquidity on firms' performance: a piece of empirical evidence from Pharmaceutical companies quoted on the Bombay Stock Exchange. Data are extracted from the Prowess IQ database, and the analysis was conducted using a balanced panel data of 82

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pharmaceutical companies for the period of 10 years from 2008 to 2017. Findings reveal that the current liquidity ratio and quick ratio have a positive and significant impact on the profitability of pharmaceutical companies measured by return on assets, while control variables leverage, firms' size, and age harm the profitability of pharmaceutical companies. They concluded that liquidity management is important for pharmaceutical companies to reap the returns of their liquidity positions. Based on their findings, they recommended that managers should not ignore the special importance liquidity has on their performance, and manage their receivables, payables and inventories effectively.

Waswa *et al.* (2018) investigated the effects of liquidity on the financial performance of the sugar industry in Kenya. Given the recurrences of liquidity management in the sugar industry, this study sought to investigate the effect of liquidity management on firm performance using a sample of five sugar firms over the period from 30th June 2005 to 2016. They estimated a random-effects regression model using Eviews. The results reveal that liquidity current liability coverage ratio is negatively correlated with firm performance, indicating that a higher value of liquidity current liability invariably influences a firm's financial position. The regression results affirm that the current liability coverage ratio negatively affects firm performance a suggestion is that the firms in Kenya's sugar industry operate on low or negative cash flows, are highly geared and lack asset and liability strategies that could improve their financial performance. They concluded that the results suggested that a negative relationship exists between liquidity management on firm performance. Based on the study findings the following policy recommendations are proposed and if implemented will help resuscitate the overall financial performance of factories in the sugar industry and hopefully reverse their financial performance

fortunes. The study recommends that careful consideration and planning of funding liquidity management is one of the ways to financial performance and as such this study recommends that there is a need for the sugar industry firms to increase their operating cash flow, to positively influence their financial performance.

Batten and Vo (2017) investigated the link between stock market liquidity and firm value in an important emerging market, Vietnam. Especially, examining this relationship using a sample of 55 firms listed on the Ho Chi Minh City stock exchange for the period 2006-2014. Data was collected from the Thompson Reuters database and tested using Ordinal Regression in Stata. They show that there is a negative relationship between liquidity and firm value. This outcome is contrary to previous results for many developed countries. They conclude that this result may be explained by differences in leverage effects and pricing-based theories, where stock liquidity influences firm performance via an illiquidity premium or mispricing. They recommended that firms should be careful of excess borrowing as it depletes liquidity strengths, and induces a negative effect on value.

Tin *et al.* (2017) investigated liquidity management analysis of Vietnamese listed firms using traditional ratios and cash flow ratios for the period of 2011-2015, using a sample of 100 listed companies in the non-financial sector. To examine whether there is a difference between traditional ratios (measured as current ratio, quick ratio, cash ratio, and interest coverage ratio) and cash flow-based ratios (measured as cash flow ratio, critical needs coverage, cash interest coverage ratio) as measures of liquidity of Vietnamese listed companies, estimation method and mean difference testing method is applied in the study. The result indicates that there is a statistical difference between cash flow ratio and current ratio as well as between critical needs cash coverage ratio and a quick ratio of Vietnamese listed companies.

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Meanwhile, no statistical difference is spotted regarding the interest coverage ratio of Vietnamese listed companies in both approaches. They concluded that the traditional ratios represent a stronger liquidity position for these firms in comparison with cash flow base ratios, but that managerial decisions on liquidity based solely on conventional ratios can be risky, thus both types of ratios should be taken into account in the decision-making process. They recommended that Managers should consider the pros and cons of having relaxed availability of cash and liquid assets to support short-term obligations.

Ofoegbu *et al*. (2016) in their research titled Liquidity management and performance of Pharmaceutical Manufacturing firms listed in Nigeria stock exchange, examined the impact of liquidity ratios on the profitability of pharmaceutical companies that are quoted on Nigeria stock exchange. The variables studied are the liquidity ratio, the debt ratio, the receivable ratio, and the sales growth ratio. The researchers used secondary data extracted from the annual report and financial statements of selected manufacturing pharmaceutical entities in Nigeria covering the period 2000 to 2011. The data was analyzed and the hypotheses were tested using multiple regression analytical tools. They found that the liquidity ratio and profitability of the companies studied were significantly and positively related. Debt ratios and the sales growth ratios have a positive but negligible impact on the profitability of the firms. The receivable ratio, on the other hand, has a negative impact but is insignificant on profitability. They concluded that excessive or inadequate liquidity is harmful to a firm as it interrupts the normal operations of the business as well as its growth and survival. They, therefore, recommended that the companies should engage experts in the management of their receivables by intensifying efforts in the collection of debts from customers and training their managers adequately on effective management of liquidity.

3.0 METHODOLOGY

3.1 Research Design and Data

The study adopted an *Ex-post Facto* research. According to Agbadudu (2002), the justification for adopting *Ex-post Facto* research design is that it is a realistic approach to solving business and social science problems which involves gathering records of past events, analyzing the records and using the outcome of the analysis to predict future events.

3.2 Sources of Data

The study used secondary data extracted from Annual Reports and Statements of Accounts of the selected twenty (20) manufacturing companies listed in the Nigerian Stock Exchange (NSE) between 2012-2017. The companies include Austin Laz Plc, Berger Paints Plc, Beta Glass Plc, CAP Plc, Champions Breweries Plc, Cutix Plc, Dangote Cement Plc, Dangote Sugar Plc, DN Tyre and Rubber Plc, Flour Mills Nigeria Plc, Greif Nigeria Plc, Guinness Nigeria Plc, Honey Well Flour Mills Plc, International Brew Plc, Lafarge Africa Plc, Meyer Plc, Multi-Trex Plc, Nascon Plc, Nestle Nigeria Plc, Nigerian Brew Plc, Nigerian Enamelware Plc, Notre Chemicals Plc, PZ Cussons Plc, Portland Paints Plc, Premier Paints Plc, Vitafoam Nigeria Plc.

3.3 Model Specification

To study adopted multiple *regression* model as specified below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu_t \quad - \quad - \quad - \quad - \quad (eqn\ 1)$$

Where; Y = Dependent Variable; $X_1 \ldots X_4$ = Independent Variables; $\beta_1 \ldots \beta_4$ = Coefficient of parameter estimates; β_0 = Constant term, μ_t = Stochastic Error Term.

The model variables were represented in multiple linear regression form as follows:

$$SURV_t = \beta_0 + \beta_1 CR_t + \beta_2 QR_t + \beta_3 SVR_t + \beta_4 CCR_t + U_t \quad - \quad - \quad (eqn\ 2)$$

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Where: $SURV_t$ =Firm Survival; CR_t = Current Ratio; QR_t= Quick Ratio; SVR_t=Solvency Ratio; CCR_t=Cash Coverage Ratio; U_t = Error term, β_0 =Constant term, β_1-β_4 = Coefficient of Parameter Estimate.

3.4   Description of Research Variables
The variables used in the study were operationally described as follows:

Firm Survival (SURV) (Dependent variable): is a dummy variable where D=1 for forms that do not have bankruptcy probability, and D=0 for otherwise. Where bankruptcy probability is measured using the Altman Z-score for public listed companies.

Current Ratio (CR) (Independent variable): is measured as current assets over current liabilities

Quick Ratio (QR) (Independent variable): is measured as current assets less inventory over current liabilities

Solvency Ratio (SVR) (Independent variable): is a long-term liquidity indicator measured as net income plus depreciation over total liabilities

Cash Coverage Ratio (CCR) (Independent variable): is measured as cash flows from operating activities over fixed interest.

3.5   Method of Data Analysis
The study used descriptive test to examine the characteristics (mean, standard deviation, variance, etc.) of the variables while diagnostic tests (Correlation) was used to ascertain the nature of the relationship between the dependent and independent variables. Ordinary Least Square (OLS) Regression Analysis was used to test the hypotheses. The probability values and the coefficients were used for decision-making on the statistical significance of the results obtained. The decision rule is to accept the alternate hypothesis and reject the null hypothesis if the P-value is less or equal to 0.05 (chosen level of significance).

4.0   RESULTS AND INTERPRETATIONS
4.1   Descriptive and Correlational Analysis
Table 1: Descriptive Test Result

Parameters	Mean	Median	Standard Deviation	Maximum	Minimum
SURV	0.444444	0.000000	0.500895	1.000000	0.000000
CR	2.668429	1.239732	5.743690	6.41061	0.932955
QR	1.389488	0.672256	2.442393	4.03660	0.634520
SVR	0.446270	0.460014	0.277255	0.932838	0.711072
CCR	12.14892	2.336951	5.25091	112.6932	15.59168

Source: Authors' Computation from Eviews 9.5 Version

Table 1 shows that firm survival (SURV) has a mean value of 0.44 during the study period. This value implies that about 44 percent of the sampled companies' during the period of the study had bankruptcy probabilities, indicating that about 56 percent of the firms had a high survival rate. The minimum and maximum values of 0 percent and 100 percent respectively indicate that most sampled firms will survive. The table indicated the average value of 2.67 times for CR. The minimum and maximum values of 0.93 and 6.41 respectively indicate that overall, the CA coverage on CL was at least 1:1 in the period studied, given the median value of 1.24.

The table value for QR revealed an average value of 1.39:1, meaning that on average, CA's less inventory over CL is about 1.39: 1. The minimum and maximum values of 0.63 and 4.03 respectively indicate that most firms QR was above 1:1 in the

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period studied, with a median value of 0.67. The table value for SVR revealed an average value of 44.6 percent with a median value of 46 percent. The minimum and maximum values of 71.1 percent and 93.3 percent respectively indicate that all sampled firms were solvent in the period studied. The table value for CCR revealed an average value of 12.15 times with a median value of 2.34 times. The results indicate that on average, cash coverage on finance cost and fixed interests demand is about 12 times, with minimum and maximum coverage of 15.6 times and 112.7 times.

Table 2: Correlation Matrix

Correlation Probability	SURV	CR	QR	SVR	CCR
SURV	1.000000				

CR	0.658762	1.000000			
	0.0000	-----			
QR	0.639438	0.893911	1.000000		
	0.0000	*0.0000*	-----		
SVR	0.567413	0.735089	0.657274	1.000000	
	0.0000	*0.0000*	*0.0000*	-----	
CCR	0.637750	0.473997	0.503379	0.438806	1.000000
	0.0000	*0.0001*	*0.0000*	*0.0003*	-----

Source: Authors' Computation from Eviews 9.5 Version

The correlation coefficients (0.66, 0.64. 0.57 and 0.64) and p-values (0.0000, 0.0000, 0.0000 and 0.0000) respectively indicate that corporate survival of listed manufacturing firms in Nigeria is positively and significantly related with the four proxies of liquidity management (current ratio, quick ratio, solvency ratio and cash coverage ratio).

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4.2   Test of Hypotheses

Table 3: Generalized Least Square (GLS) regressions Result

Panel A: ARMA GLS Regression Estimator Result for Hypothesis 1				
$SURV_t = \beta_0 + \beta_1 CR_t + e_t$				
Constant CRDWEqn.				
Coefficient	0.4420.020		2.21	
t-statistics			*(1.598)*	
p-value			*(0.1147)*	
Panel B: ARMA GLS Regression Estimator Result for Hypothesis 2				
$SURV_t = \beta_0 + \beta_1 QR_t + e_t$				
Constant QRDW Eqn.				
Coefficient	0.4080.064***		2.23	2
t-statistics			*(2.008)*	
p-value			*(0.049)*	
Panel C: ARMA GLS Regression Estimator Result for Hypothesis 3				
$SURV_t = \beta_0 + \beta_1 SVR_t + e_t$				
Constant SVRDW Eqn.				
Coefficient	0.141	0.802***	2.20	3
t-statistics		*(3.373)*		
p-value		*(0.001)*		
Panel D: ARMA GLS Regression Estimator Result for Hypothesis 4				
$SURV_t = \beta_0 + \beta_1 CCR_t + e_t$				
Constant CCRDW Eqn.				
Coefficient	0.388	0.194***	2.24	4
t-statistics		*(2.829)*		
p-value		*(0.034)*		
***: Denotes significance at the 0.05 level*				

Source: Authors' Computation from Eviews 9.5 Version

In Panel A, the GLS regression conducted to examine the effect of the current ratio on firm survival revealed that the result was positive, with a coefficient of 0.020. Though the effect is positive, the t-statistics of 1.598 and *p of 0.11* > 0.05 indicate that the effect is not statistically significant. Hence, the null hypothesis was accepted and the study concluded that the current ratio (CR) has no significant effect on the survival of listed manufacturing firms in Nigeria.

In Panel B, the regression result for the effect of the quick ratio on corporate survival indicates a significant and positive coefficient. The effect of quick ratio on survival of manufacturing firms is about 6.4 percent, which is statistically significant at the 5% significant level (i.e. t-statistics and p-value of 0.04 < 0.05). It can be said therefore that the quick ratio has more effect on survival than the current ratio because the exclusion of inventory gives the ratio more liquid component, which can be easily converted to cash. Hence, the alternate hypothesis

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was accepted. The study concluded that the quick ratio (QR) has a significant and positive effect on the survival of listed manufacturing firms in Nigeria.

In Panel C, the regression result showed that the solvency ratio has a coefficient and p-value of 0.802 and 0.001. Since the p-value (0.001) was less than the 0.05 significance level, the alternate hypothesis was accepted. The study, therefore, concluded that the solvency ratio has a significant and positive effect on the survival of listed manufacturing firms in Nigeria.

Panel D of the regression output showed that the cash coverage ratio has a coefficient value of 0.194 and a statistically significant p-value of 0.034. This implies that the cash coverage ratio will influence corporate survival by 19.4 percent. Since the p-value (0.001) was less than the 0.05 significance level, the alternate hypothesis was accepted. The study, therefore, concluded that the cash coverage ratio has a significant and positive effect on the corporate survival of listed manufacturing firms in Nigeria.

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The study found that all the components of liquidity management are positive and significantly correlated with the corporate survival of listed manufacturing firms in Nigeria. More specifically, the study found that:

i. Current Ratio (CR) has positive effect on the survival of listed manufacturing firms in Nigeria. However, the positive effect is not significant at the 0.05 level of significance. This implies that though current ratio has an increasing effect on firms survival, such effect is not significant.

ii. Quick ratio (QR) has a positive and significant effect on the survival of listed manufacturing firms in Nigeria. The positive and significant effect at the 0.05 level implies that quick ratio is a liquidity management component that has an increasing effect on firm survival.

iii. Solvency Ratio (SR) has a positive and significant effect on the survival of listed manufacturing firms in Nigeria. The positive and significant effect at the 0.05 level implies that solvency ratio is a liquidity management component that has an increasing effect on firm survival.

iv. Cash coverage ratio (CCR) has a positive and significant effect on the survival of listed manufacturing firms in Nigeria. The positive and significant effect at the 0.05 level implies that cash coverage is a liquidity management component that has an increasing effect on firm survival.

5.2 Conclusion

The study concluded that liquidity management has significant effect on the survival of quoted manufacturing companies in Nigeria. This suggests that effectively managing liquidity components such as components of working capital – current assets and current liabilities, as well as solvency ratio, will ultimately increase the likelihood of organizational survival.

5.3 Recommendations

Based on the results and conclusion, the following recommendations were made:

i. That excessive emphasis on inventory holding must be minimized, to improve the influence of current ratio management on corporate survival.

ii. That manufacturing firms in Nigeria should maintain current quick-ratio benchmarks to ensure continued survival.

iii. Manufacturing firms should employ adequate cash coverage standards in order to ensure that the cash at their disposal is adequate to cover all their interest and finance costs.

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iv.   Manufacturing firms should not only focus on short-term liquidity components, but also pay great attention to components of long-term liquidity, such as solvency ratio, in order to continue in the foreseeable future.

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APPENDIX A: RAW DATA USED

COMPANY	YEAR	CA	CL	INV	NI	DEP	TL	CFO	FI
AUSTIN LAZ PLC	2017	124,457	12,889	56,575	315	15,331	1,699,093	643,964	-234,611
	2016	542,336	14,895	360,418	-146,126	163,439	1,760,775	-44,702	112,345
	2015	486,110	17,543	239,866	-59,092	63,439	1,867,988	104,347	189,012
	2014	495,973	44,088	158,050	-158,942	44497	2,041,290	116,493	-109,823
	2013	670,261	113,680	573,730	7,563	172,967	2,379,017	-97,895	-111,903
	2012	366,334	81,174	285,889	60,093	156,725	2,240,441	120,368	-99,011
BERGER PAINTS PLC	2017	1581978	1670280	574991	246276	106787	1670280	326215	-149237
	2016	1560693	1498084	569475	224007	106643	1498084	758941	-162484
	2015	2,168,268	1,143,703	459,526	330,316	117,958	1,308,540	514,780	-172,740
	2014	2,075,700	816,531	523,921	148,808	126,594	1,180,315	462,336	-77,008
	2013	1,586,397	922,893	537,857	257,580	106,771	1,174,393	-165,600	-24,507
	2012	1,538,464	874,961	537,857	38,921	109,918	1,015,374	255,537	-30111
BETA GLASS PLC	2017	26,334,166	9,042,950	5,025,216	4,115,142	112,398	13,066,496	1,076,544	-126,261
	2016	22,650,856	6,990,457	4,210,668	3,799,393	106,729	11,709,166	4,912,545	-19,808
	2015	9,592,944	5,527,007	3,479,878	1,991,127	120,090	27,171,069	4,842,441	-68,980
	2014	17,325,659	7,673,957	2,295,922	2,390,223	79,091	10,975,406	5,040,621	-71,232
	2013	17,472,739	9,423,313	3,301,032	1,467,344	76,092	13,413,324	2,922,972	-89,099
	2012	12,564,592	4,760,565	2,649,148	1,328,580	88,911	10,000,764	1,283,118	-76,345
CAP PLC	2017	4,263,484	2,671,721	1,187,405	1,498,730	81,188	2,771,770	1,804,682	-20,668
	2016	4,252,706	2,495,429	933,886	1,603,357	80,145	2,632,509	134,054	-23,196

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	2015	2,913,886	1,833,838	679,193	1,739,559	80,682	1,889,167	1,661,700	-34,572
	2014	2576122	-1,825,999	580,303	1,662,425	78,098	-1,900,308	1,341,425	-35,762
	2013	2554585	-1,684,573	577,852	1,416,795	81,889	-1,766,864	1,448,653	-19,897
	2012	2,423,767	-1,682,098	975,123	1,115,554	69,072	-1,757,230	913,532	-24,591
CHAMPIONS BREWERIES PLC	2017	2,161,853	1,627,573	592,767	517,562	627,820	1,953,401	47,221	-36,581
	2016	2,166,255	2,208,173	530,410	530,389	631,312	2,290,380	368,019	-67,128
	2015	2325616	3,073,998	350,133	77,140	622,428	3,207,523	1,287,183	-36,571
	2014	1538973	3578929	354286	-754,523	848,485	3721950	1,008,118	-115,865
	2013	1,012,414	13,683,275	305,631	-1,178,025	696,737	13,746,102	1,058,062	-35,672
	2012	820,759	10,166,205	235,879	-1,336,690	782,130	10,229,200	162,339	-55,731
CUTIX PLC	2017	1,552,918	1,112,405	1,103,158	257,498	780,991	1,315,822	190,068	-123,293
	2016	1071229	756,297	487,959	190,551	309,876	1,021,503	644,996	-105,679
	2015	1,072,162	922,893	616,009	149,209	411,298	1,225,102	222,355	-105,679
	2014	970,022	696,154	437,061	207,116	560,192	1,044,967	126,655	-105,679
	2013	716,661	399,744	280,496	151,423	450,971	476,312	193,538	-63,408
	2012	606,763	357,909	335,394	79,014	556,091	432,458	38,761	-63,408
DANGOTE CEMENT PLC	2017	193,601,000	403,772,000	55,850,000	254,630,000	43,959,000	620,070,000	297,968,000	-30,934
	2016	193,601,000	390,226,000	55,850,000	368,205,000	47,113,000	521,197,000	236,064,000	-26,747,000
	2015	112,586,000	140,586,000	38,369,000	213,171,000	43,713,000	375,996,000	249,235,000	-19,274,111

	2014	117,883,370	205,829,677	36,314,579	185,814,123	34,202,056	324,897,950	195,608,439	-14,825,401
	2013	105,943,377	124,380,218	30,853,539	210,262,754	32,028,158	624,000,619	275,953,727	-11,762,862
	2012	447,596,761	124,380,218	30,853,539	152,925,098	27,267,634	639,466,109	130,949,179	-19,364,214
DANGOTE SUGAR PLC	2017	157,249,111	91,644,488	44,779,483	37,822,608	3,136,692	96,857,307	26,455,953	-13,200,000
	2016	72,412,320	95,709,749	45,648,975	14,198,693	3,149,141	101,351,298	34,548,986	-6,000,000
	2015	72,412,320	35,516,958	14,035,388	12,659,855	2,749,029	40,285,276	10,655,421	4,800,000
	2014	64,522,412	33,220,434	14,047,767	13,537,612	3,098,092	38,761,602	-5,595,694	2,309,871
	2013	57,280,617	27,578,687	11,097,891	13,537,612	1,725,252	33,294,670	1,076,855	-6,000,000
	2012	64,280,589	32,520,850	14,030,303	10,796,416	1,982,121	36,782,291	25,057,357	3,456,711
DN TYRE AND RUBBER PLC	2017	551,981	450,110	321,009	23,001	32,091	23,768	310,098	345,009
	2016	445,679	123,456	121,098	35,671	45,009	21,009	-109,887	-245,617
	2015	667,819	110,911	133,980	45,009	32,019	12,984	-235,671	-236,781
	2014	977,867	112,909	134,562	67,811	56,719	35,671	450,110	-457,009
	2013	889,011	162,098	122,298	78,092	33,233	31,009	109,874	-112,097
	2012	998,712	115,617	109,009	45,671	19,087	21,009	142,998	-154,097
FLOUR MILLS NIG PLC	2017	225874556	217412600	63597671	9,829,046	7,102,001	235817458	-14,328,877	-2,971,314

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	2016	137613069	114508685	37257683	10425786	6,108,723	133052468	20924187	-13011811
	2015	141,505,096	116,115,447	47,921,280	2,419,544	5,109,624	134,878,212	-11,230,640	-9,548,061
	2014	107,036,627	81,893,576	45,371,104	10,465,518	3,091,890	121,202,444	9,934,541	-9,358,092
	2013	111,888,648	84,602,072	40,992,727	8,745,447	2,901,103	130,366,208	-518,877	-8,281,195
	2012	82,034,888	52,176,871	26,274,989	8,200,458	5,678,901	92,500,212	2,464,074	-5,733,726
GOLDEN GUINEA BREW PLC	2017	21,367,621	34,567,111	51,990,119	12,909,220	5,009,221	89,712,111	1,981,229	2,567,811
	2016	32,673,891	22,322,122	12,908,132	9,023,098	8,901,110	98,091,220	1,001,981	-2,980,011
	2015	42,989,001	32,789,110	23,567,109	8,712,909	9,091,119	72,345,166	980,110	-998,091
	2014	34,298,114	23,898,002	21,009,123	7,809,125	10,001,981	61,209,873	789,117	-1,120,981
	2013	16,727,872	17,890,109	56,009,198	7,892,011	11,112,871	66,239,000	623,091	-887,109
	2012	12,998,351	19,082,651	23,091,267	12,090,918	6,789,001	51,456,710	111,209	-2,100,119
GRIEF NIG PLC	2017	636,578	425,239	182,126	49,424	32,091	425,239	127,019	732,098
	2016	566,472	381,223	126,965	27,106	35,678	384,906	-135,337	561,097
	2015	567,282	20,739	112,595	24,624	29,087	379,652	107,399	678,991
	2014	501,293	291,215	115,120	43,443	14,568	326,751	45,639	-899,991
	2013	516,550	324,210	160,241	30,626	18,901	363,252	51,316	-678,001
	2012	459,505	296,951	133,553	38,947	17,889	330,864	59,755	-567,201
GUINNESS NIG PLC	2017	345,678	325,698	133,401	21,098	178,091	241,009	61,098	-119,871
	2016	456,298	321,789	135,609	43,291	16,398	298,103	76,229	-1,001,001
	2015	123,980	112,309	145,609	55,129	13,980	231,009	45,679	-456,789

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	2014	345,671	398,019	176,098	61,298	10,981	451,098	98,209	-1,110,986
	2013	32,238,619	51,275,097	12,400,102	11,863,726	5,678,900	75,021,510	47,689	1,290,912
	2012	28,778,183	45,199,537	13,193,762	14,214,620	2,098,887	67,398,153	23,542,190	-128,908
HONEY WELL FLOUR MILLS PLC	2017	1581978	1670280	574991	246276	106787	1670280	326215	-149237
	2016	1560693	1498084	569475	224007	106643	1498084	758941	-162484
	2015	2,168,268	1,143,703	459,526	330,316	117,958	1,308,540	514,780	-172,740
	2014	2,075,700	816,531	523,921	148,808	126,594	1,180,315	462,336	-77,008
	2013	1,586,397	922,893	537,857	257,580	106,771	1,174,393	-165,600	-24,507
INTERNATIONAL BREW PLC	2017	1,538,464	874,961	537,857	38,921	109,918	1,015,374	255,537	-30111
	2016	26,334,166	9,042,950	5,025,216	4,115,142	112,398	13,066,496	1,076,544	-126,261
	2015	22,650,856	6,990,457	4,210,668	3,799,393	106,729	11,709,166	4,912,545	-19,808
	2014	9,592,944	5,527,007	3,479,878	1,991,127	120,090	27,171,069	4,842,441	-68,980
	2013	17,325,659	7,673,957	2,295,922	2,390,223	79,091	10,975,406	5,040,621	-71,232
LAFARGE AFRICA PLC	2017	17,472,739	9,423,313	3,301,032	1,467,344	76,092	13,413,324	2,922,972	-89,099
	2016	12,564,592	4,760,565	2,649,148	1,328,580	88,911	10,000,764	1,283,118	-76,345
	2015	2,161,853	1,627,573	592,767	517,562	627,820	1,953,401	47,221	-36,581
	2014	2,166,255	2,208,173	530,410	530,389	631,312	2,290,380	368,019	-67,128
	2013	2325616	3,073,998	350,133	77,140	622,428	3,207,523	1,287,183	-36,571
	2012	9,592,944	5,527,007	3,479,878	1,991,127	120,090	27,171,069	4,842,441	-68,980

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MEYER PLC	2017	17,325,659	7,673,957	2,295,922	2,390,223	79,091	10,975,406	5,040,621	-71,232
	2016	17,472,739	9,423,313	3,301,032	1,467,344	76,092	13,413,324	2,922,972	-89,099
	2015	12,564,592	4,760,565	2,649,148	1,328,580	88,911	10,000,764	1,283,118	-76,345
	2014	2,161,853	1,627,573	592,767	517,562	627,820	1,953,401	47,221	-36,581
	2013	2,166,255	2,208,173	530,410	530,389	631,312	2,290,380	368,019	-67,128
MULTI-TREX PLC	2017	970,022	696,154	437,061	207,116	560,192	1,044,967	126,655	-105,679
	2016	716,661	399,744	280,496	151,423	450,971	476,312	193,538	-63,408
	2015	606,763	357,909	335,394	79,014	556,091	432,458	38,761	-63,408
	2014	1538973	3578929	354286	-754,523	848,485	3721950	1,008,118	-115,865
	2013	1,012,414	13,683,275	305,631	-1,178,025	696,737	13,746,102	1,058,062	-35,672
NASCON PLC	2017	820,759	10,166,205	235,879	-1,336,690	782,130	10,229,200	162,339	-55,731
	2016	1,552,918	1,112,405	1,103,158	257,498	780,991	1,315,822	190,068	-123,293
	2015	1071229	756,297	487,959	190,551	309,876	1,021,503	644,996	-105,679
	2014	1,072,162	922,893	616,009	149,209	411,298	1,225,102	222,355	-105,679
	2013	7,412,320	3,551,695	1,403,538	1,265,985	2,749,029	4,028,527	1,065,542	4,800,000
NESTLE NIG PLC	2017	5,522,412	3,002,043	1,404,776	1,353,761	3,098,092	3,876,160	-5,595,694	2,309,871
	2016	5,028,061	2,157,868	1,109,789	1,353,761	1,725,252	3,329,467	1,076,855	-6,000,000
	2015	2,423,767	-1,682,098	975,123	111,555	69,072	-1,757,230	913,532	-24,591
	2014	2,161,853	1,627,573	592,767	517,562	627,820	1,953,401	47,221	-36,581
	2013	2,166,255	2,208,173	530,410	530,389	631,312	2,290,380	368,019	-67,128

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